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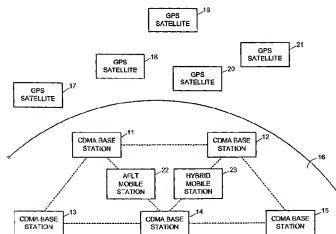
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5775 Morehouse Drive, San Diego, CA 92121 (US).(72) Inventors: RILEY, Wyatt; 37167 Pantan Terrace #2005,  
Fremont, CA 94536 (US). GIRERD, Richard; 314  
Martens Avenue, Mountain View, CA 94040 (US). BI-  
ACS, Zoltan; 1516 Cedarwood Drive, San Mateo, CA  
94403 (US).(74) Agents: WADSWORTH, Philip R. et al.; QUALCOMM  
Incorporated, 5775 Morehouse Drive, San Diego, CA  
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30 October 2003(54) Title: USE OF MOBILE STATIONS FOR DETERMINATION OF BASE STATION LOCATION PARAMETERS IN A  
WIRELESS MOBILE COMMUNICATION SYSTEM

(57) Abstract: In a wireless communication network, base station antenna positions and time offsets are stored in a base station almanac data base along with other information used for obtaining the most reliable mobile station position fixes under a variety of conditions. The system uses the position fixes of mobile stations and terrestrial ranging information to determine base station antenna positions and base station timing offsets. The base station antenna positions are determined during normal mobile station position determinations, in order to maintain and improve the antenna location data, and to correct for change or relocation of the base station antennas. It is possible to recover quickly from a loss of cell sector identity during relocation of a base station antenna, and to ensure accuracy of mobile station position determination based on ranging from the base stations, and rapid acquisition of position data from mobile stations having global satellite receivers.

## INTERNATIONAL SEARCH REPORT

 International Application No  
 PCT/US 02/40053

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC 7 601S5/02

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 601S

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, COMPENDEX, INSPEC, PAJ, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01 84862 A (ERICSSON TELEFON AB L M) 8 November 2001 (2001-11-08) abstract page 1 -page 4, line 20 page 6, line 4 -page 7, line 11 page 11, line 10 -page 12, line 11 claims 3-5 ---	1-25
A	US 6 166 685 A (SOLIMAN SAMIR S) 26 December 2000 (2000-12-26) abstract ---	2,20
A	US 6 230 018 B1 (WATTERS J MICHAEL ET AL) 8 May 2001 (2001-05-08) column 4, line 52 -column 5, line 13 --- -/-	2,20

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

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 European Patent Office, P.B. 5818 Patentissam 2  
 NL - 2280 HV Rijswijk  
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
 Fax: (+31-70) 340-3016

Authorized officer

Ó Donnabháin, C

## INTERNATIONAL SEARCH REPORT

International Application No.

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	SAVARESE C ET AL: "Location in distributed ad-hoc wireless sensor networks" 2001 IEEE INTERNATIONAL CONFERENCE ON ACOUSTICS, SPEECH, AND SIGNAL PROCESSING. PROCEEDINGS. (ICASSP). SALT LAKE CITY, UT, MAY 7 - 11, 2001, IEEE INTERNATIONAL CONFERENCE ON ACOUSTICS, SPEECH, AND SIGNAL PROCESSING (ICASSP), NEW YORK, NY: IEEE, US, vol. 4 OF 6, 7 May 2001 (2001-05-07), pages 2037-2040, XP002225743 ISBN: 0-7803-7041-4 abstract	1-25
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Information on patent family members

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